

PET750-12-050xA

AC-DC Front-End Power Supply

The **PET750-12-050** is a 759 Watts, 1U form factor power supply module with Active PFC (Power Factor Correction) and PMBus® (Power Management Bus). It converts standard AC mains power into a main output of 12V for powering intermediate bus architectures (IBA) in high performance and reliability servers, routers, and network switches.

The PET750-12-050 meets international safety standards and displays the CE-Mark for the European Low Voltage Directive (LVD).



Key Features & Benefits

- Best-in-Class, 80 PLUS Certified “Platinum” Efficiency
- Wide Input Voltage Range 90-264 VAC
- AC Input with Power Factor Correction
- Always-On 15 W Standby Output (5 V/3 A)
- Hot-Plug Capability
- Parallel Operation with Active Current Sharing
- DC-DC Digital Controls for Improved Performance
- High Density Design 20.5 W/in³
- Small Form Factor 50.5 x 40.0 x 300 mm
- PMBus® for Control, Programming and Monitoring
- Over Temperature, Output Over Voltage and Over Current Protection
- One DC OK Signalling Status LED

Applications

- Networking Switches
- High Performance Servers
- Routers

Disclaimer: PMBus is a registered trademark of SMIF, Inc.

1. ORDERING INFORMATION

PET	750	-	12	-	050	x	A
Product Family	Power Level	Dash	V1 Output	Dash	Width	Airflow	Input
PET Front-Ends	750 W		12 V		50 mm	N: Normal R: Reverse	A: AC

MODEL	OUTPUT VOLTAGE	MAX LOAD CONVECTION ¹	MAX LOAD 300 LFM ^{1,2}	MINIMUM LOAD	RIPPLE & NOISE ³	CONNECTOR	TOTAL REGULATION
PET750-12-050NA	12 VDC	62 A	62 A	0 A	1%	Card edger	± 2.5%
PET750-12-050RA	12 VDC	62 A	62 A	0 A	1%	Card edger	± 2.5%

2. OVERVIEW

The PET750-12-050 AC-DC power supply is a mainly DSP controlled, highly efficient front-end. It incorporates resonance-soft-switching technology and interleaved power trains to reduce component stresses, providing increased system reliability and very high efficiency. With a wide input operating voltage range. PET750-12-050 maximizes power availability in demanding server, network switch, and router applications. The front-end is fan cooled and ideally suited for server integration with a matching airflow path.

The PFC stage is controlled using interleaved Critical mode to guarantee best efficiency and unity power factor over a wide operating range.

The DC-DC stage uses soft switching resonant technology in conjunction with synchronous rectification. An active OR-ing device on the output ensures no reverse load current and renders the supply ideally suited for operation in redundant power systems. The always-on standby output, provides power to external power distribution and management controllers. It is protected with an active OR-ing device for maximum reliability.

Status information is provided with front-panel LED. In addition, the power supply can be controlled and the fan speed set via the I2C bus. It allows full monitoring of the supply, including input and output voltage, current, power, and inside temperatures.

Cooling is managed by a fan controlled by the DSP controller. The fan speed is adjusted automatically depending on the actual power demand and supply temperature and can be overridden through the I2C bus.

NOTE: Output GND is connected to chassis in power supply.

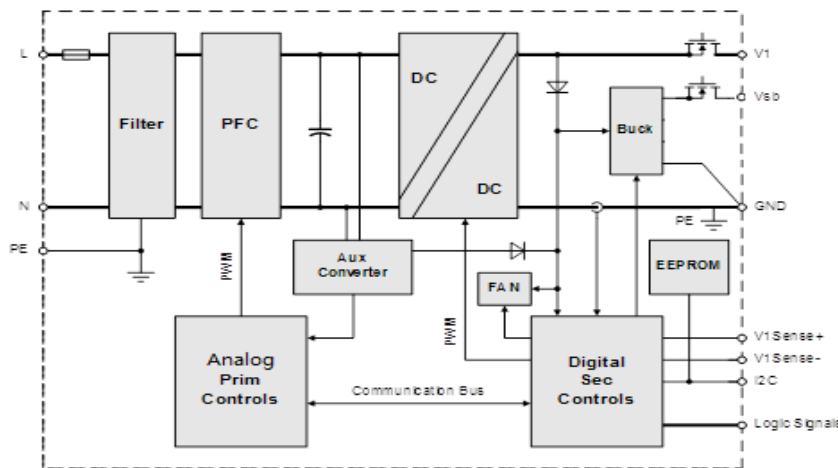


Figure 1. PET750-12-050 Block Diagram